# Unit Plan Template

Click on any descriptive text, then type your own.

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| **Unit Author** | | | | | | |
| First and Last Name | | | | |  | |
| School District | | | | |  | |
| School Name | | | | |  | |
| School City, State | | | | |  | |
| **Unit Overview** | | | | | | |
| **Unit Title** | | | | | | |
| Unit Title | | | | | | |
| **Unit Summary** | | | | | | |
| unitplan | | | | | | |
| **Subject Area** | | | | | | |
| untitled1 | | | | | | |
| **Grade Level** | | | | | | |
| Grade | | | | | | |
| **Approximate Time Needed** | | | | | | |
| untitled1 | | | | | | |
| **Unit Foundation** | | | | | | |
| **Targeted Content Standards and Benchmarks** | | | | | | |
| untitled1 | | | | | | |
| **Student Objectives/Learning Outcomes** | | | | | |
| untitled1 | | | | | |
| **Curriculum-Framing Questions** | | | | | |
|  | | **Essential Question** | | Can we sustain our use of water? | |
|  | | **Unit Questions** | | Where does our water come from?  How does topography impact surface water?  How do our dams impact Cottage Grove?  Is our aquifer healthy?  What is a riparian zone?  How does water fit into the ecosystem?  Is our water safe?  What is water used for? | |
|  | | **Content Questions** | | What is the water cycle?  What is our watershed and what does it look like?  What is happening with our glaciers locally and globally? Snowpack?  Are there variations in our surface water?  Where are the flood zones at East Regional Park?  What is the impact of the volume of water on Cottage Grove urban growth boundary if the dams break?  What percentage of landowners in CFW Watershed use wells?  Are the CG public works ready for population growth (supplying water?) UNIT  Crops/irragation? Water usage? Camping usage?  Are our wetlands growing or diminishing?  If needed, how can we repair or extend our wetlands/riparian areas?  What macroinvertebrates do we have locally?  What tests are done to measure water quality? How does our water rate? | |
| **Assessment Plan** | | | | | |
| **Assessment Timeline** | | | | | |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | |  | |  | | | **Before project work begins** | | **Students work on projects and complete tasks** | | **After project work is completed** | | |  | |  | |  | | |  |  |  |  |  |  | | * untitled3 | * untitled3 | * untitled3 | * untitled3 | * untitled3 | * untitled3 | | | | | | | |
| **Assessment Summary** | | | | | |
| untitled4 | | | | | |
| **Unit Details** | | | | | |
| **Prerequisite Skills** | | | | | |
| prereq skill | | | | | |
| **Instructional Procedures** | | | | | |
| **Exploration:** At the beginning of the learning cycle, students **actively explore** materials, phenomena, problems, and ideas to make observations and collect data. (Hands-on activities are preferable but activities may include a variety of media, including video and text.) An initial, less structured exploration allows students to explore objects and systems at their own pace and with little guidance. Students often become highly motivated when they are permitted to do hands-on explorations before the concept is introduced. Then another, **more structured** exploration allows students to reexamine the same objects and systems more scientifically. During this time, students generate questions and form and test their own hypotheses (Beisenherz & Dantonio, 1996).  **Concept Development:** During this phase, **instruction focuses on content**, including scientific inquiry and nature of science. In order for students to be successful with scientific inquiry, they must have both content knowledge and procedural knowledge. While direct instruction can be effectively utilized in this phase, scientific inquiry should also be used to teach content. Model scientific inquiry through a variety of investigations, both group and independent, and demonstrations. The teacher can further explain the concept by using textbooks, audiovisuals aids, and other materials (Beisenherz & Dantonio, 1996).  **Application: Depth of understanding** is facilitated when the concept is reinforced or expanded during the application phase, usually through the use of hands-on activities. Activities in this phase will often do double duty, serving as the initial activity in the exploration phase of a new, closely related concept that will be developed in a separate learning cycle.  Hands-on activities in the exploration and application phases can motivate students as they encounter problems that arouse their curiosity (Beisenherz & Dantonio, 1996). Sometimes problems can be introduced by using **“discrepant events”** – encounters that students find perplexing. Before being presented with a discrepant event, students should have a familiarity with the concepts, skills, and techniques that allow them to recognize a discrepant event, and to suggest hypotheses and procedures for collecting data. Beisenherz and Dantonio (1996) provide an example: “The observation that water expands when it freezes is discrepant to students only if they have been led to infer from previous activities that liquids expand when heated and contract when cooled.” Using discrepant events to introduce a new topic is particularly effective at piquing students’ curiosity. Taken from: <http://www.ode.state.or.us/search/page/?id=1583>  Exploration: carve figure out of chalk, share, then put vinegar on them (dirty rain)  Use filter experiment and pH, conductivity, light or turbidity probes  Sandbox (hands on-low structure)  Procedural Knowledge:  Gather data (learn protocol, reproduce results, replicate results)  Content Knowledge: logarithmic scale for pH, relate milk, vinegar, koolaid  Conductivity (pure water?, lemons? Ions-periodic table)  Turbidity – correlation to photosynthesis  Read about TMDL and water quality index  Application: look at historical data from A team; search for weird data on internet i.e. 947 NTU  Analysis: how do we rank? Why?  Exploration: show movie of glaciers calving, visit Eliot glacier?  Sandbox (hands on-low structure)  Procedural Knowledge: Gather data (learn protocol, reproduce results, replicate results)  Content Knowledge  Application: look at historical data – USGS site  Analysis  Exploration:  Sandbox (hands on-low structure)  Procedural Knowledge: Gather data (learn protocol, reproduce results, replicate results)  Content Knowledge  Application: look at historical data  Analysis  Exploration:  Sandbox (hands on-low structure)  Procedural Knowledge: Gather data (learn protocol, reproduce results, replicate results)  Content Knowledge  Application: look at historical data  Analysis | | | | | |
| **Accommodations for Differentiated Instruction** | | | | | |
|  | **Special Needs Students** | | accomodations | | |
|  | **Nonnative Speakers** | | accomadations2 | | |
|  | **Gifted/Talented Students** | | accomadations3 | | |
| **Materials and Resources Required For Unit** | | | | | |
| **Technology – Hardware** (Click boxes of all equipment needed) | | | | | |

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| Camera  Computer(s)  Digital Camera  DVD Player  Internet Connection | Laser Disk  Printer  Projection System  Scanner  Television | VCR  Video Camera  Video Conferencing Equip.  Other |
| **Technology – Software** (Click boxes of all software needed.) | | |
| Database/Spreadsheet  Desktop Publishing  E-mail Software  Encyclopedia on CD-ROM | Image Processing  Internet Web Browser  Multimedia | Web Page Development  Word Processing  Other |

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| --- | --- |
| **Printed Materials** | untitled2 |
| **Supplies** | Supplies |
| **Internet Resources** | Int Resc |
| **Other Resources** | untitled2 |

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